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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,136	04/13/2004	Lucas M. O'Gary	59095US002	4530

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EXAMINER	
MARCHESCHI, MICHAEL A	
ART UNIT	PAPER NUMBER
1755	

NOTIFICATION DATE	DELIVERY MODE
09/20/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/823,136	O'GARY ET AL.	
	Examiner	Art Unit	
	Michael A. Marcheschi	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,7-21 and 25-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,9-21,25,28-30 and 33-36* is/are rejected.

7)☒ Claim(s) *7,8,26,27,31 and 32* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/12/07 has been entered.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 7, 8, 26, 27, 31 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of records fails to teach or suggest these features.

Claims 1-3, 9-18, 21, 25, 28-30 and 33-36 are rejected under 35 U.S.C. 103(a) as obvious over Bergsten et al. (051) in view of King (639) and Lux (070).

Bergsten et al. teaches in the figures, specifically figure 1, and sections [0017]-[0022] and [0050], a nonwoven article comprising a nonwoven substrate having first and second surfaces, wherein the first and second surfaces define a plurality of peaks and valleys in a rectilinear grid, said peaks being uniform having a height as defined. Section [0050] states that abrasives may be provided on or beneath the wiping member (nonwoven substrate). A second substrate is attached to the nonwoven substrate, the second substrate being a fabric (section [0030]).

King et al. teach in column 3, lines 38-60 known conventional methods to coat a substrate with an abrasive. The methods being (1) the use of a slurry coating with a size coating thereon or (2) the use of make and sizes coatings.

Lux teaches in column 4, line 55-column 5, line 20, column 6, lines 2-5, column 8, lines 55-57 and column 10, lines 20-25, various thickness known for nonwovens, as well as abrasive sizes. The reference further defines that the use of a make coat/size coat is a conventional way to apply an abrasive coating. Finally, the reference defines that in order to provide a sufficient attachment means to the nonwoven, a backing is attached to the surface of the nonwoven (surface opposite the abrasive coating).

The primary teaches a similar structure as defined in instant claim 1, with the exception of the abrasive coating (abrasive/binder mixture). This reference, however, teaches in section [0050] that abrasive particles can be attached to the wiping member (nonwoven), thus implying that the surface of the nonwoven web has an abrasive character. Although this reference does not specifically teach the application of an abrasive/binder mixture (abrasive particles dispersed throughout the binder) to coat the nonwoven material, as defined by instant independent claims 1 and 21, it is the examiners position that one skilled in the art would have found the application of

an abrasive/binder mixture to the nonwoven web according to the primary reference obvious motivated by the fact that the primary reference implies that the nonwoven web (substrate) has an abrasive surface (see section [0050] which teaches that abrasives can be applied on the wiping member) and that King teaches a conventional way to make the surface of a flexible substrate have an abrasive character, which is to apply an abrasive/binder slurry to the surface of the substrate. The examiner acknowledges that the primary reference teaches the application of abrasive particles, only, however, it is the examiners position that the application of abrasive particles by way of using a binder is obvious in order to optimize the bonding of the abrasive particles to the web.

Although the primary reference does not specifically teach the application of a make coat, abrasive particles and size coat to coat the nonwoven material, as defined by instant independent claim 30, it is the examiners position that one skilled in the art would have found the application of a make coat, abrasive particles and size coat to the nonwoven web according to the primary reference obvious motivated by the fact that the primary reference implies that the nonwoven web (substrate) has an abrasive surface (see section [0050] which teaches that abrasives can be applied on the wiping member) and that King and Lux teach that this is a conventional way to make the surface of a flexible substrate have an abrasive character, which is to apply a make coat, abrasive particles and a size coat. The examiner acknowledges that the primary reference teaches the application of abrasive particles, only, however, it is the examiners position that the application of abrasive particles by way of using a binder is obvious in order to optimize the bonding of the abrasive particles to the web.

With respect to the thickness values of claims 2, 3 and 16, although the primary reference does not define the thickness for the nonwoven substrate, the substrate of this reference has a thickness and it is the examiners position that one skilled in the art would have appreciated that the desired thickness would be apparent from conventional thickness values for nonwovens that are made into articles. In other words, the use of a non woven having a conventional thickness, as clearly shown by Lux, is clearly within the scope of, and/or would have been appreciated by, the skilled artisan absent evidence of criticality. With respect to the "thickness variation", as can be seen from the figures of primary reference, the thickness is relatively constant. With respect to claim 9, the primary reference states that abrasive particles can be beneath the wiping member (nonwoven) and this implies that the second surface of the nonwoven can have an abrasive coating. With respect to claim 11, the use of a sponge, as the backing, would have been well within the scope of the skilled artisan because the examiner takes official notice that this is a conventionally known backing material and the substitution of one backing material for another is clearly within the scope of the skilled artisan. With respect to claims 10 and 12, the primary reference teaches this limitation. With respect to the abrasive size (claims 13-14), with the combination being obvious as defined above, one skilled in the art would have found it obvious to use any known conventional abrasive size, such as the size defined by Lux (i.e. the grade defined corresponds to the sizes within the claimed range), as the abrasive particles size according to the primary reference because this abrasive particles size is conventionally known to provide the necessary abrasive character to nonwovens. With respect to claims 17-18 and 34-35, the figures clearly depict these limitations. With respect to claims 33 and 36, if abrasive

particle are present on the wiping member, this reads on them being present on both the peaks and valleys. In view of this, the limitations of claims 1-3 and 9-18 and 30, 33-36 are met.

With respect to the method claim 21, the primary reference, as combined with King, makes the application of an abrasive/binder slurry an obvious way to form the abrasive coating on the nonwoven according to the primary reference. In other words, King teaches conventional ways to apply abrasive particles (primary reference states that abrasive particles can be adhered to the nonwoven) and it is the examiners position that one skilled in the art would have appreciated and found this conventional application techniques obvious as the way to adhere the particles defined by the primary reference.

With respect to claim 25, King specifically teaches that a size coat is known to be applied over slurry coating in the formation of flexible backings coated with an abrasive slurry.

With respect to claim 29, as can be seen from the figures of primary reference, the thickness is relatively constant.

Claim 19 is rejected under 35 U.S.C. 103(a) as obvious over Bergsten et al. (051) in view of King (639) and Lux (070), as applied to claim 1 above and further in view of Nollen et al. (091).

Nollen et al. teaches in column 6, lines 61-68 that enhancement of the physical properties of a non woven article is accomplished by incorporating a reinforcing scrim with said nonwoven.

The use of a reinforcing scrim with the nonwoven according to the primary reference would have been obvious because it is the examiners position that one skilled in the art would have appreciated that physical properties (i.e. tear strength (tensile strength (tensile properties),

puncture resistance etc.) of the nonwoven can be can optimized by using a reinforcing scrim, this concept being clearly disclosed by Nollen et al. In view of this, since the optimization of tear strength and puncture resistance are beneficial property in abrasive articles, one skilled in the art would have been motivated to incorporate any known mechanism to optimize said properties.

Claim 20 is rejected under 35 U.S.C. 103(a) as obvious over Bergsten et al. (051) in view of King (639), Lux (070) and Nollen et al. (091), as applied to claim 19 above and further in view of Braunschweig et al. (076).

Braunschweig et al. discloses in the abstract that a conventional way to reinforce a substrate is to incorporate a reinforcing material within the substrate.

Although the scrim might not be defined as being incorporated in the nonwoven, but otherwise attached to the surface (as depicted by Nollen et al.), it is the examiners position that one skilled in the art would have found the incorporation of the scrim obvious by any technique. Since it is clearly known to incorporate a reinforcing material within a substrate, as is clearly shown by Braunschweig et al., one skilled artisan would have appreciated that the scrim according to the Bergsten et al. (051) in view of King, Lux and Nollen et al. combination could be incorporated within the substrate. The examiner acknowledges that Braunschweig et al. is not directed to nonwovens, however, this reference is being applied to show conventional ways of reinforcing substrate (irrespective of what the substrate is). Finally, it is the examiners position that the skilled artisan would have appreciated that one known reinforcing technique for one type of substrate could be applied to other substrates absent evidence to the contrary.

Claims 1, 15, 17, 18, 19, 20, 21, 28, 29 and 36 are rejected under 35 U.S.C. 102(b) as anticipated by Smith (157).

Smith teaches in figure 1, column 7, lines 10-28, column 8, lines 11-25, the examples and the claims, a nonwoven article comprising a nonwoven substrate having first and second surfaces, wherein the first and second surfaces define a plurality of peaks and valleys in a rectilinear grid, said peaks being uniform having a height as defined (see figures). Column 8, lines 15-17 states that a gritty or abrasive binder may be applied to one or both sides of the substrate. A nonwoven can be strengthened by the incorporation therein of a scrim.

The reference anticipates the claims because the reference teaches a nonwoven article comprising a nonwoven substrate having first and second surfaces, wherein the first and second surfaces define a plurality of peaks and valleys in a rectilinear grid, said peaks being uniform having a height as defined and the peaks (and valleys) can be coated with an abrasive binder (forms a scrubber wipe). The broad interpretation of abrasive binder is an abrasive/binder mixture (i.e. a binder with abrasive distributed therein), thus this interpretation reads on the claimed abrasive coating. With respect to the variation in the thickness, as can be seen from the figures, the thickness is relatively constant. With respect to claims 17 and 18, as can be seen from the figures, these limitations are met. With respect to claim 36, if abrasive particles are present on the surface, thus reads on them being present on both the peaks and valleys.

With respect to the method of claims 21 and 29, after embossing the nonwoven web, an abrasive binder is applied to the surface of the embossed web and, as defined above, this reads on an abrasive/binder mixture (i.e. a binder with abrasive distributed therein). In view of this, the claimed method limitations are also met.

Claims 2, 3, 9, 13, 14 and 16 are rejected under 35 U.S.C. 103(a) as obvious over Smith (157) in view of Lux (070).

With respect to the thickness values of claims 2, 3 and 16, although the primary reference does not define the thickness for the nonwoven substrate, the substrate of this reference has a thickness and it is the examiners position that one skilled in the art would have appreciated that the desired thickness would be apparent from conventional thickness values for nonwovens that are made into articles. In other words, the use of a non woven having a conventional thickness, as clearly shown by Lux, is clearly within the scope of, and/or would have been appreciated by, the skilled artisan absent evidence of criticality. With respect to claim 9, the primary reference states that abrasive particles can be applied to both sides and this implies that the second surface of the nonwoven can be have an abrasive coating. With respect to the abrasive size (claims 13-14), with the combination being obvious as defined above, one skilled in the art would have found it obvious to use any known conventional abrasive size, such as the size defined by Lux (i.e. the grade defined corresponds to the sizes within the claimed range), as the abrasive particles size according to the primary reference because this abrasive particles size is conventionally known to provide the necessary abrasive character to nonwovens.

Claim 25 is rejected under 35 U.S.C. 103(a) as obvious over Smith (157) as applied to claim 21 above and further in view of King (639).

As defined above, the method of claim 21 is defined by the Smith. The reference, however, fails to teach the use of a size coating over the slurry coat. It is the examiners position that the use of a size coating over the slurry coating would have been within the scope of the skilled artisan in order to structurally reinforce the bond of abrasive particles. In other words, 2

bonds are better than one, the second bond being a result of the size coating. King clearly states that size coats are known to be applied over slurry coating in the formation of coated abrasives.

Claims 30 and 33-35 are rejected under 35 U.S.C. 103(a) as obvious over Smith (157) in view of King et al. (639).

The primary teaches a similar structure as defined in instant claim 30, with the exception of the abrasive coating being a make coat/abrasive/size coat structure. This reference, however, does teach that an abrasive binder coating can be applied. Although this reference does not specifically teach the application of a make coat/abrasive/size coat to coat the nonwoven material, it is the examiners position that one skilled in the art would have found the application of this to the nonwoven web according to the primary reference obvious, as an alternative to the application of an abrasive binder (reads on an abrasive/binder mixture (i.e. a binder with abrasive distributed therein) as set forth above), motivated by the fact that King teaches that abrasive coatings can be accomplished by either (1) the use of a slurry (abrasive/binder mixture) or (2) the use of a make coat/abrasive/.size coating technique. In other words, the interchangeability of coating techniques is well within the scope of the skilled artisan especially in view of them being taught as being functional equivalent techniques (see King). With respect to the variation in the thickness, as can be seen from the figures, the thickness is relatively constant. With respect to claims 34 and 35, as can be seen from the figures, these limitations are met. With respect to claim 33, if abrasive particles are present on the surface, thus reads on them being present on both the peaks and valleys.

Applicant's arguments filed 7/12/07 have been fully considered but they are not persuasive.

Applicants argue that since Bergsten et al. discloses that wipes which scratch are undesirable, the reference does not teach the claimed invention. In addition, applicants argue that since the wipes that scratch are undesirable, they do not teach an article that will function as an abrasive article. The examiner acknowledges that the reference teaches in sections [0003] and [0005] that scratching due to particles occurs, however, this does not preclude the reference from using abrasives in the wipe. This is apparent from section [0050] which literally teaches that abrasives can be present on (the surface) or beneath the wiping member. In view of this, since abrasive particles can be present, the article can function as an abrasive article contrary to applicants position. The teaching of abrasive particles being present clearly suggests the claimed invention when combined with the other references (i.e. how to apply abrasives to the surface of a nonwoven substrate).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

7/07
MM

Michael A Marcheschi
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Art Unit 1755